

Remarks

Reconsideration of the application is respectfully requested. Claim 4 was objected to. Claim 4 has now been corrected and should be in full conformance.

5                Claims 1-12 were rejected under Section 112 for being indefinite. Claim 1 has been clarified that the 10% relate to volume and that it excludes chip moisture disposed inside the chips. Claim 1 has also been clarified to require that the free acidic fluid fraction refers to the fluid  
10                surrounding the chips, as suggested by the Examiner. It is submitted that the amended claims are now in full conformance with the requirements of Section 112.

                 Claims 1-10 were rejected under Section 103 as being obvious over Cael in view of Marzolini and Snekenes. This  
15                rejection is respectfully traversed. No new matter has been added to the amended claims.

                 To summarize the present invention, it is an effective method for pre-treatment of chips. The chips are acidified in an acidic treatment fluid and subsequently  
20                drained so that the drained chips obtain a remaining free acidic fluid fraction surrounding the chips that does not exceed 10% by volume excluding any chip moisture inside the chips. The drained acidic slurry is heated to a temperature exceeding 20°C and is recycled back to the acidic treatment  
25                device. Additional acidic treatment fluid is added to the acidic treatment device only in a replacement amount to compensate for the amount of acidic fluid that is retained in

the drained chips. The chips are then steamed and  
impregnated. It is of importance that the acid liquid has  
sufficient high temperature so that the chips are thoroughly  
soaked by the acidic liquid, i.e. it is a warm-soaking process  
5 and not a cold-soaking process.

It is submitted that none of the cited references  
teaches or suggests all of the limitations of the amended  
claim 1.

Cael merely teaches treatment of chips with mono-  
10 peroxysulfate to permit more ready separation of non-  
cellulosic materials from the chips (see abstract, col. 1,  
lines 54-55). By removing the non-cellulosic materials from  
the chips, the subsequent pulping or bleaching processes are  
improved (col. 1, lines 16-19 and 53-57). In col. 2, lines  
15 22-23, Cael explains that the pretreatment liquor (including  
the dissolved non-cellulosic material) is drained away.

On page 4, last paragraph, the Examiner states that  
it would have been obvious to perform the treatment of Cael  
using the recycling technique of Marzolini. Applicants  
20 respectfully disagree.

The required modification of Cael to recycle the  
drained acidic solution does not make sense. Cael is a  
process that is focused on removing non-cellulosic materials  
from the chips by treating the chips with the acidic  
25 monopersulphate solution. The acidic solution is then drained  
(see col. 2, line 22) and discarded from the process. It is

submitted that it does not make sense to recycle the drained acidic solution that is laden with non-cellulosic material, back to the treatment vessel since that would defeat the purpose of removing the non-cellulosic materials from the chips. This also explains why Cael fails to teach or suggest the step of adding only a replacement amount of acidic solution to the acid treatment device since Cael discards the drained acidic solution that is filled with the undesirable non-cellulosic materials. In other words, it is submitted that there is no motivation to add back the undesirable non-cellulosic material into the acidic solution of the acid treatment device.

It has long been held that for a modification to be obvious, Cael and the other cited references must explicitly teach or suggest the required step to motivate the artisan to make the required modifications. In re Fine 5 USPQ.2d (Fed. Cir. 1988), the court ruled (on page 1944) that there must be a motivation for the required modification to be obvious. In Winner International Royalty Corp. v. Wing 48 USPQ.2d 1139, the court ruled (on page 1144) that there must have been some explicit teaching or suggestion in the art to motivate one of ordinary skill in the art to make the required modifications.

Applicants submit that Cael completely lacks the required teaching or suggestion to motivate the artisan to make the required modifications to Cael's invention related to the steps of recycling and replacement filling of acidic

fluid. In other words, it would not be obvious for an artisan to learn about the step of recycling the acid slurry back to the acid treatment device by reviewing the teachings of Cael and the other cited references when Cael completely fails to  
5 teach or suggest this step and it would make Cael's process much less effective since the undesirable non-cellulosic material would be put back into the acidic solution which is the very same material that Cael wants to remove from the chips. The skilled person would not recycle an acidic  
10 solution that includes dissolved non-cellulosic materials and hope that the amount of non-cellulosic materials in the chips would decrease when treated in an acidic solution laden with the very same undesirable non-cellulosic materials. Consequently, since the non-cellulosic materials are not  
15 recycled back to the acid treatment device, Cael also fails to teach the step of adding the acidic fluid only in a replacement amount to compensate for the acidic fluid retained in the chips.

Marzolini does cure the deficiencies related to the  
20 recycling step and adding the replacement acidic fluid because his recycling step is conditional on the temperature of the acidic fluid being lower than 20°C. More particularly, Marzolini merely teaches a treatment that requires a temperature of the acid solution that is lower than 20° C, see  
25 claim 1. Additionally, tables 4 and 5 show 18° C as the temperature required in the acid step. It is submitted that

Marzolini expressly teaches away from heating acid slurry to a temperature exceeding 20° C since he specifically requires that the acid solution must be lower than 20° C, as specified in claim 1 and Tables 4 and 5. In col. 2, lines 49-51,

5 Marzolini explains that the recycling of the mono-persulphuric acid (AMP) solution is possible because the AMP is stable in the acid step and does not react with the mixture components. This explains why it is important to keep the acid solution cool. Applicants fail to see why a person of ordinary skill

10 in the art would look to Marzolini to learn about recycling of the acidic liquid having a temperature exceeding 20°C when Marzolini's recycling is conditional on the low temperature, and thus is not combinable with heating the acid slurry to a temperature exceeding 20°C, as required by the amended claim

15 1. It is submitted that it would not be obvious to combine Marzolini's recycling process together with an acidic liquid that has a temperature exceeding 20°C when Marzolini expressly teaches away from exceeding this temperature and that such temperature would make the AMP unstable and react with the

20 mixture components.

It is thus submitted that it would not be obvious to combine Cael and Marzolini as suggested because the recycling of the non-cellulosic materials back to Cael's acid treatment device would make Cael's process less effective and the

25 heating of the acidic fluid to a temperature above 20°C would be contrary to the express teachings of Marzolini that his

recycling step is conditional up keeping the acidic fluid at a temperature below 20°C.

The cited Snekkenes reference does not cure these deficiencies either since it completely lacks any teaching  
5 whatsoever of any acid treatment before steaming.

In view of the above, it is submitted that the amended claim 1 is allowable over the cited references.

Claims 2-10 are submitted to be allowable because they depend upon the allowable base claim 1 and because each  
10 claim includes limitations that are not taught or suggested in the cited references.

Claim 11 was rejected under Section 103 as being obvious over Cael in view of Marzolini and Snekkenes and further in view of Grace. This rejection is respectfully  
15 traversed.

Claim 11 is submitted to be allowable because it depends upon the allowable base claim 1 and because the claim includes limitations that are not taught or suggested in the cited references.

20 Claim 12 was rejected under Section 103 as being obvious over Cael in view of Marzolini and Snekkenes and further in view of Metso valve document. This rejection is respectfully traversed.

Claim 12 is submitted to be allowable because it  
25 depends upon the allowable base claim 1 and because the claim includes limitations that are not taught or suggested in the

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cited references.

The application is now submitted to be in condition  
for allowance, and such action is respectfully requested.

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Respectfully submitted,

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